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ABSTRACT

Peer influence on students has been of interest to sociologists for some time. But most studies of elementary classroom interaction have focused primarily on teacher-student interaction. A study of peer influence on other group members was designed to explain why students assigned to low ability groups became inattentive more frequently than students assigned to high ability groups. Sixteen videotapes of reading classes in a first grade classroom with 23 students were analyzed. The students were assigned to four ability groups: high, medium-high, medium-low, and low. Results indicated that peer influence was one process by which ability group assignment influenced student attentiveness. Often one student's behavior affected several peers simultaneously. Verbal behavior was more distracting than nonverbal behavior. Most cases of peer influence on attentiveness occurred in the medium-low reading group, indicating that boredom may have been an influencing factor. The finding that students influenced peers so frequently during the teacher-directed lessons suggests that peers are likely to be important influences on students' behavior during most classroom lessons. (JAC)

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Peer Influence on Student Attentiveness During Classroom Lessons*

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Peer influence on students has been of interest to sociologists for some time although in a rather limited way. Peers' educational aspirations have consistently been found to predict students' own educational aspirations (Sewell, Haller, and Portes, 1969; Sewell, Haller, and Ohlendorf, 1970). More recently, factors which are likely to influence association with college-oriented peers have also been included in research designs. Specifically, assignment to a college track in high school has been found to increase the likelihood of association with college-oriented peers which, in turn, influences students' own college plans (Alexander and McDill, 1976; Hauser, Sewell, and Alwin, 1976; Alexander, Cook and McDill, 1978).

Despite the importance of peer influence at the high school level, little attention has been given to peer influence at the elementary level. Instead, most studies of elementary classroom interaction have focused primarily on teacher-student interaction. Recently some attention has been given to peer interaction in student-directed groups and informal groups (Steinberg and Cazden, 1979; Wilkinson and Calculator, 1982; Cooper, Marquis, and Ayers-Lopez, 1982). However, peers are likely to have important direct influences on student behavior in any group whether it is teacher-directed or student-directed.

Peer influence is especially important to investigate in groups which are assigned by teachers in some systematic way. The most frequent basis for assignment to instructional groups in elementary classrooms is student ability or aptitude. Use of ability grouping for reading instruction is especially common, occurring in between 74 to 80 percent of all classrooms (Austin and Morrison, 1963; Wilson and Schmits, 1978). This practice is extremely important in that it determines which other students will be present when students are being instructed and, thus, which students they will be influenced by dur-

ing classroom lessons.

Reading groups, like other focused encounters, have a central or main involvement. During reading group lessons, the lesson itself is the main involvement to which all students are expected to attend. However, this shared focus of involvement depends on the participation of all members (Goffman, 1963; Scheflen, 1973). While spontaneous involvement confirms the reality of the lesson and adds to the involvement of others, lack of involvement can question the lessons' reality and lead to others' uninvolvement (Goffman, 1963).

McDermott, et al. (1978) found that non-verbal behaviors are central for defining and maintaining the reality of reading lessons. Reading positioning was marked by everyone looking at their books in congruent postures. They also found that every member monitored everyone else for an interpretation of what is going on. Non-verbal behaviors were also important cues for non-group members. Because low group members spent less time in reading positioning they were interrupted by students from outside more frequently than were high group members (McDermott and Aron, 1978).

Other studies have found higher amounts of inattentiveness and reading turn interruptions in low ability groups (Eder, 1981; Eder, 1982). Furthermore, students in low groups have been found to become inattentive at higher rates than students in high groups, controlling for individual characteristics such as reading aptitude, maturity level, and sex (Felmlee and Eder, 1981). Not only are these higher rates of inattentiveness in low groups likely to interfere with learning, students are often evaluated on the basis of such non-normative behavior. In fact, conduct marks were found to be the most important predictor of academic marks at the elementary level (Entwistle and

Hayduck, 1981).

This study will attempt to explain some of the reasons why students assigned to low ability groups become inattentive more frequently than students assigned to high groups. It will focus on one group process, i.e. peer influence on other group members. A number of different types of peer influence will be examined including distraction, imitation, and direct contact. In all cases, both verbal and non-verbal behaviors will be considered and the need for in-depth analysis of video-taped data will be emphasized.

Methods

Description of Classroom and Ability Groups

The classroom which was studied was a first grade classroom with twenty-three students. Students were assigned to ability groups during the first week of school. These assignments were based mainly on kindergarten teacher perceptions of reading aptitude, although the teacher also relied on her own observation of the students. Initially, the high, medium-high, and medium-low groups each had six members while the low group had four. Later the high group was increased to seven members, and one student moved from the school, leaving three members in the low group.

These groups met each day for fifteen to twenty minutes of reading instruction. The primary activity for these lessons was individual oral reading during which the teacher assigned turns at reading to one student at a time until all students had at least one change to read. This was found to be the main activity of most ability-based reading groups (Austin and Morrison, 1963).

Data Collection and Analysis

Sixteen video-taped reading lessons were transcribed and analyzed, four lessons from each of the four groups. Half of the lessons took place during the second month of school and half took place during the seventh month. All students had had prior experience with being video-taped and their behavior on other days when they were not taped indicated that the video-taped lessons were typical of lessons in this classroom.

There are a number of reasons why video-taped data are essential for adequately understanding the nature of peer influence on attentiveness. First, they allow one to examine non-verbal as well as verbal behaviors. Since attentiveness, itself, is usually indicated by a set of non-verbal behaviors including appropriate posture and gaze, it is crucial that a complete non-verbal record of each students' behavior be available. Also many of the behaviors which influences other students' attentiveness are likely to be non-verbal such as touching, playing with an object, etc. If one focused only on verbal behavior, only some sources of peer influence would be identified.

Second, since group interaction is exceedingly complex, with each member being potentially influenced by any other member, it is necessary to have a record of each member's behavior. It would be difficult to obtain this record with on-the-spot coding since it would require bringing numerous observers into the classroom. Even then it would be difficult for an observer to code all possible relevant behaviors for each student. Thus, it is not surprising that research which has used on-the-spot coding has focused primarily on teacher-student interaction.

Third, video-taped data allow one to analyze sequences of events. Thus, one can identify events which both precede and follow a specific behavior.

This is essential for examining peer influence in detail. In contrast, coding schemes which focus on each student for a given period of time do not allow one to determine the immediate influences of one student's behavior on others.

Types of Peer Influence

Three main types of peer influence were identified: distraction, imitation, and direct contact. The most basic type of influence was simple distraction. Students were frequently distracted by noises and non-topical comments of other students. A single comment might distract more than one student as in the following example which occurred during Sara's reading turn: Medium Low Group[1]

	Verbal	Nonverbal
Sara:	"Why does he jump."	
	[	
* Gary:	Mrs. Jones, look what I found in my gum.	Zach is playing with his bookmarker. Zach and Dale look at Gary.
Teacher:	Watch your book.	Points to Gary.

Here Gary's comment draws the attention of Zach and Dale, perhaps because it suggests there is something interesting to see.

A more complicated type of influence is imitation. Here a student's attention is not only distracted by another member's behavior, but the behavior is also copied. This behavior might be verbal as in the next example which occurred during Peter's reading turn:

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[1]The following notations will be used in this and other examples: (word) = unclear utterance; "word" = reading from books or charts; [= simultaneous speech; * = key utterance or behavior.

Medium Low Group

	Verbal	Nonverbal
Peter:	"I love"	
	[	
*Dale:	Woo woo.	
Gary:	Woo woo.	
Peter:	"playing with the... girls."	
Teacher:	Good. "I love playing with the girls" but what happens?	
Jeff:	Wooo - oo- ooo.	Points to Gary.
Teacher:	Jeff, are you watching? Marker?	

Here the content of the story being read and particularly the word "love" led to a chain reaction of non-topical comments by three group members, beginning with Dale.

A similar incident occurred in the medium high group during Nancy's turn.

Medium High Group, Fall

	Verbal	Nonverbal
Nancy:	"Go...Mark, go. Here...I...go."	
Teacher:	Good.	
Nancy:	"Here I go, Mark."	
* Eric:	Go Mark go, go Mark go, go Mark go.	
* Larry:	[Go Johnny go, go Johnny go.	
Teacher:	Very good.	Looking at Nancy.
Nancy:	( )	
Larry:	Go Johnny go, go Johnny go.	
Eric:	[Go Johnny go, go Johnny go.	
Teacher:	Not "go", but "Come Mark, come."	Looking at Nancy
Larry:	Go Johnny go, go Johnny go.	
Eric:	[Go Johnny go, go Johnny go.	
Teacher:	"Come". Very good. Let's turn the page.	

Again the story being read includes a phrase which Eric enjoys repeating. This in turn leads to a similar phrase by Larry which is repeated by both boys throughout the rest of the reading turn.

Students were also distracted by non-verbal behaviors which they then imitated. The next example occurred while the group was reading in unison from a chart.

Low Group

	Verbal	Nonverbal
		Robin is tapping her book marker on the floor.
Teacher:	OK. Let's look here. Girls. Robin.	Becky taps Robin's forehead with her marker. The teacher points to the chart.
		* Robin puts her marker on the side of her head like a feather. Becky sees her and does the same. Cynthia also puts her marker by her head.
Cynthia:	"What-"	
Teacher:	Here's our new word. "Wuh"	
Robin:	"Why"	Becky looks at her book. All three girls still are holding their markers up. Becky is still looking down.
Teacher:	"Wanted." Let's do it again.	
All:	"Wanted"	
Teacher:	"Wanted". Next. Becky? Watching?	Becky looks up at the chart and puts her marker down.

In this case Robin's action sets off a chain reaction in which all three group members perform an identical behavior.

Sometimes non-verbal behaviors go unnoticed by other students. In the following example, it appears that Gary's nonverbal behavior was not noticed until he also made verbal remarks. The verbal comments distracted both Sara and Zach who, after noticing Gary's non-verbal behavior, began to imitate it.

Medium Low Group

	Verbal	Nonverbal
Teacher:	All right, go ahead Jeff. "I..." C'mon, here you go. "I..."	* Gary puts his marker on his forehead. The teacher points to Jeff's page.
Dale:	"Like...little...dogs [	
Teacher:	All right, now let's look at the "L" words. We're having trouble with these two words. Lemme put 'em on the board. What's this one? Zach? "I l-l-"	* Gary puts his marker over his mouth. The teacher writes on the blackboard. Zach is still looking at his book.
Zach:	"Like"	
Teacher:	Starts with a "L". "Like."	* Gary puts his marker on his forehead.
* Gary:	I like, I like, I like, I like, I like, I like, I like, I like. [	Zach and Sara look at Gary. Sara puts her marker on her forehead.
Teacher:	And this is the word that tells about these kind of dogs.	
Jeff:	Small dogs -	
(?):	Small	Gary keeps his marker on his forehead. Sara puts hers down.
(?):	"Little."	

Teacher:	"Little."	
	(Jeff continues reading. Eric interrupts from outside the group.)	
* Gary:	Little dogs like to jump. Woop-woop. Woop-woop.	Gary shakes his head with the marker on his forehead. Zach briefly puts his marker on his forehead and shakes his head.
Eric:	[Teacher, I know what those dogs are.	
Teacher:	I know you do.	
Jeff:	"I like little dogs."	
Teacher:	Beautiful. "I like little dogs." Read the next line.	
* Gary:	"I like little dogs." Woop-woop, woop-woop.	Gary puts his marker back on his forehead. Zach looks at Gary and puts his marker on his forehead again. The teacher points to Gary's book, then to Jeff's book.
Teacher:	Here we go. "Li..." What kind of dogs?	

Although Gary began playing with his book marker at the beginning of Jeff's turn, it was not until he started repeating the phrase "I like" that this behavior was noticed. Sara immediately imitates the behavior. Later Gary makes another verbal comment as he shakes his head and bookmarker, which Zach notices and imitates. Zach's attention is again drawn to Gary when he makes a "woop-woop" sound and again, Zach imitates his marker play. Zach and Gary continue to play with their book-markers during this reading turn and the following turn.

A third process by which peers influenced inattentiveness during reading lessons involved some type of direct contact. Occasionally students would talk to another member during the lesson. Often it was the person sitting next to them as in this example which occurred during Robin's reading turn:

Low Group

	Verbal	Nonverbal
Teacher:	When you're looking for somebody, what do you say, Robin?	
* Cynthia:	( )	Cynthia whispers something to Becky.
Teacher:	If you're looking for somebody, or something is lost, what do you say? You wanna know "Wh"... "Where." "Where."	
Robin:	"Where are..."	
Teacher:	"Where are."	
Robin:	"Where are you going?"	Cynthia looks at Becky
Teacher:	Very good. A little bit louder now.	The teacher points to Cynthia's page, then to Becky's page.
Teacher:	Very good.	
* Cynthia:	( )	Cynthia agains whispers to Becky.
Teacher:	I like the way that Robin is talking. Okay, let's turn the page. Cynthia, you may read. Let's find out what time it is.	

Not only is Cynthia not paying attention to the lesson but by talking with Becky she is keeping Becky from paying attention as well.

The contact between two members might also be entirely non-verbal as one member shows another his or her book marker, book, or other object, as in this example from Otis' reading turn:

Medium High Group

	Verbal	Nonverbal
Otis:	"But we...can't... (ride it.)"	Nancy shows Irene that she has gum in her mouth.
Teacher:	"We can't ride it."	Irene shakes her head.

In both of these cases, only the student being contacted was distracted. Often times, contact between two members served as a source of distraction for other members as in this example from Zach's reading turn:

Medium Low

	Verbal	Nonverbal
Zach:	"M-m-m..."	* Gary tries to take Dale's bookmarker.
* Dale:	I'm telling.	
Teacher:	"Man."	Sara looks at Dale.
Teacher:	Who is that man?" Dale?	The teacher hands a marker to Dale.

Here Sara may have been distracted by Dale's comment more than by Gary's non-verbal behavior. In general, it would seem that verbal contact would be more distracting than non-verbal contact which members might not even notice.

Occasionally, verbal management by the teacher would draw attention to non-verbal contact that otherwise might have gone unnoticed as in this example from Sara's reading turn:

Medium Low Group

	Verbal	Nonverbal
Sara:	This one?	
Teacher:	Right. Okay. Don't touch him, Jeff.	* Jeff puts his arm around Peter. The teacher points to Jeff. Gary looks at Jeff.
Sara:	"I like"	

In general, several types of peer influence may occur simultaneously. While students may be aiming their remarks or behavior at one other member, it may simultaneously distract other students. Thus one behavior can potentially influence several other members.

In the last example, a group member makes a comment which is responded to by someone who is sitting on the other side of the group. This and the following behaviors distract three other group members and leads one of them to imitate the behavior. Thus, within a brief period of time, all three types of peer influence occur.

Medium Low Group

	Verbal	Nonverbal
Teacher:	Just a moment. I'm waiting until everybody is through reading.	Dale plays with his marker.
* Gary:	This is makin' me hungry.	
* Dale:	What's makin' you hungry?	Dale is sitting on the opposite side of the group.
Gary:	That.	* Gary points to a picture in his book and giggles. Jeff looks at Gary. Sara looks at Gary, then at Dale. Dale looks at his own book to see.
Peter:	( )	Peter says something to Gary.
Teacher:	Okay. Don't turn the page yet, Dale. All right, who knows what Rose did?	* Gary holds up his book and pretends to eat something on it. Sara looks at Gary.

Dale:	I know.	Dale raises his hand.
Sara:	[She played.	
Teacher:	All right.	The teacher points to Dale.
Dale:	She went outside to play and	Peter watches Gary as he continues to pretend to eat his book.
Teacher:	[She went out to play? Who was there?	
Peter:	I'm gonna rip off this page so I can eat it.	
Sara:	[Her shadow.	Peter pretends to eat his book.
Dale:	Her shadow.	
Teacher:	Her shadow was there? What else?	
Gary:	[No-o.	Peter continues pretending to eat his book.
Dale:	She wasn't lonely.	

Beginning with Gary's first comment, a sequence of behaviors occurs that eventually distracts every group member but one. Since Dale, who is sitting opposite Gary, responds to Gary's comment, their brief interaction is visible to the entire group and catches the attention of Jeff, Sara, and Peter. This leads Peter to make a remark to Gary after which Gary starts to pretend to eat his book, drawing the attention of both Sara and Peter. While Sara, Jeff, and Dale return their attention to the lesson, Peter continues to watch Gary and later imitates his actions. Thus, not only does Gary's comment result in a number of students becoming inattentive, it leads one member to become inattentive for a relatively long period of time.

Discussion

In summary, one student's behavior often caused other group members to become inattentive through simple distraction, imitation, and/or direct contact. Sometimes only one peer was affected by a student's behavior, other times many peers were affected. For example, a single behavior might distract several students at once. Likewise, the same behavior might be imitated by several members, producing a chain reaction of inattention. Also, when one peer was contacted directly, several other peers might simultaneously be distracted. In one case, a single behavior began a sequence of events that affected four of the other five group members.

Other studies have found that children will imitate the behavior of same-age and older peers (Hicks, 1965; Brody and Stoneman, 1981). Thus, imitation appears to be a basic type of peer influence in young children. Also, other research has found that students attend more to their classmate's inappropriate non-verbal and verbal behaviors than to their normative behavior (Solomon and Wahler, 1973). This suggests that distraction is also a common type of peer influence in classroom settings.

While students were influenced by both verbal and non-verbal behaviors of others, verbal behaviors appeared to be more distracting. This makes sense, since if students are paying attention to their books, they would not notice some of their peers' nonverbal behaviors. In one case, marker play was not noticed until it was coupled with verbal remarks. These remarks attracted the attention of two members who then began to imitate the marker play. Likewise, nonverbal contact would often go unnoticed by others unless it was combined with some verbal remark. In one interaction, the teacher's verbal management served to draw attention to a student who had hugged another student.

These findings have some important implications for management techniques during classroom lessons. Specifically, non-verbal management may be less disruptive than verbal management which can draw attention to behavior that would otherwise go unnoticed by other group members. Also, the most disruptive type of contact was verbal contact between members who were sitting at opposite sides of the group. This suggests that the strategy of separating students may not always be effective. While it may reduce the amount of contact between the two members, if any contact occurs between the students it is likely to be highly distracting to other group members.

These findings also have important implications for the common practice of ability grouping. Since students are often influenced by other group members, assignment to a particular group can have important implications for a student's attentive behavior. Most of the cases of peers influencing others' attentiveness found in this study occurred in the medium low group. Thus students assigned to this group would be much more likely to become inattentive due to the influence of their peers than would students assigned to another group. Students who are inattentive are likely to learn less as well as to be viewed as being poorly behaved. In other words, not only are students' behaviors affected by their peers, but academic achievements and evaluations may be affected as well.

One reason why these processes were most common in the medium low group is that low group lessons are often more boring and repetitious than high group lessons. As some students become inattentive through boredom, the behaviors they engage in distract the attention of others. Since the low group was relatively small (i.e. three to four members) there were many fewer opportunities for peer influence than in the other three groups. This sug-

gests that one successful way to reduce the amount of negative peer influence in low groups is to reduce the size of these groups.

In conclusion, peer influence appears to be one of the processes by which ability group assignment influences student attentiveness. Often one student's behavior affected several peers simultaneously. Verbal behavior was found to be more distracting than non-verbal behavior. The fact that students influenced peers so frequently during these teacher-directed lessons suggests that peers are likely to be important influences on students' behavior during most classroom lessons. Additional research is needed in order to understand the many ways in which students' behavior is directly affected by their peers.

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